

KURNOSOV, A.M., kand.tekhn.nauk; USTINOV, M.I., kand.tekhn.nauk; ZYKOV, V.M.,  
kand.tekhn.nauk; LIKAL'TER, L.A., gornyy inzh.; ANISIMKIN, A.Ye.,  
gornyy inzh.; USATOV, A.I., gornyy inzh.

Use of design methods in determining optimum parameters for coal  
mines to be reorganized. Ugol' 40 no.9:52-58 S '65.

(MIRA 18:10)

1. Institut gornogo dela imeni A.A.Skochinskogo (for Kurnosov,  
Ustinov, Zykov, Likal'ter). 2. Luganskproyekt (for Anisimkin,  
Usatov).

3/007/60/000/004/005/005  
B002/E055

AUTHORS: Cherdyntsev, V. V., Isabayev, Yo. A., Surkov, Yu. A.,  
Orlov, D. P., Usatov, E. P.

TITLE: Excess  $U^{235}$  in magnetite with increased actinium content

PERIODICAL: Geokhimiya, no. 4, 1960, 373-374

TEXT: The magnetite in a pegmatite vein was found to have a high content of  $U^{235}$  and actinium. The contents of radioelements was 1.3 ppm of uranium and 10 ppm of thorium. The Ac/Ra ratio exceeds the normal value by a factor of  $4.3 \pm 0.3$ . The age of the minerals is approximately 100 million years with certainty, however, less than 300 million years. The present publication reports the results obtained in determinations of the  $U^{235}/U^{238}$  ratio. From the ratio of the number of fission fragments produced by thermal neutron irradiation to the  $\alpha$ -activity of the sample, the

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Excess  $U^{235}$  in magnetite with...

S/007/60/000/001/005/005  
BC02/BC55

$U^{235}/U^{238}$  ratio was found at  $1.18 \pm 0.06$ , which after correction for the presence of other radioelements alters to  $1.30 \pm 0.10$ . Determinations of the  $\alpha$ -spectra in the alpha-spectrometer at Kazakhskiy universitet (Kazakh University) yielded a ratio  $U^{235}/U^{238} = 1.60 \pm 0.13$ , and, in the alpha spectrometer of the Institut geokhimii im. V. I. Vernadskogo AN SSSR (Institute of Geochemistry imeni V. I. Vernadskiy AS USSR), a value of  $1.5 \pm 0.1$ . The latter determination was carried out by Yu. A. Surkov. A last series of measurements in the alpha analyzer KazGU (Kazakh State University), carried out by D. P. Orlov gave a value of  $1.40 \pm 0.15$ . This excess of  $U^{235}$  in the magnetite with increased actinium content can only be explained by the existence of a transuranic isotope in nature up to the present day, which decays to actinium and the odd-numbered uranium isotope. I. K. Gerling is mentioned in the publication. There are 1 figure, 1 table, and 9 references: 9 Soviet-bloc and 3 non-Soviet-bloc.

ASSN: Kazakh State Univ im. S. M. Kirov

Card 2/2

22461

S/186/60/002/001/015/022

A057/A129

21,3100

AUTHORS: Isabayev, Ye.A.; Usatov, E.P.; Cherdyntsev, V.V.

TITLE: Isotopic composition of uranium in natural objects

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 94 - 97

TEXT: In the present work the isotopic composition of uranium was investigated in some primary and secondary natural minerals (molybdenite, uraninite, magnetite, thorite, cinnabar and schreckingerite), as well as in water being in contact with granite mountain regions. Separation of uranium isotopes, namely of the  $U^{238}$  mother (UI) and the disintegration product  $U^{234}$  (UII) was already observed in natural objects by V.V. Cherdyntsev and P.I. Chalov [Ref. 1: Tr. III sessii Kom. po opred. absolyutn. vozrasta geolog. formatsiy (Proceedings of the third session of the Commission for the determination of the absolute age of geological formations), Izd. AN SSSR, 175 (1955)] and was later studied by Starik et al. [Ref. 2: Geokhimiya, 1, 5, 462 (1959)], V.I. Baranov et al. [Ref. 3: Geokhimiya, 1, 5, 465 (1959)] and P.I. Chalov [Ref. 4: Geokhimiya, 1, 2, 265, (1959)]. Being less firmly bound to the crystal lattice of the mineral, UII is often enriched in secondary uranium minerals or natural water, while a decrease

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Isotopic composition of uranium in natural objects

in the  $U_{II}/U_I$  ratio is observed in minerals exposed for long time to the effect of natural water. The present experiments were carried out with an  $\alpha$ -analyzer (designed by Ye.A. Isobayev) containing a six-electrode-electron impulse chamber as impulse indicator. The uranium samples were placed on six disk-shaped high-voltage electrodes, which were fixed on a cylinder. Rotating the latter the samples were brought into measuring position (without dismantling the camera), and the spectrum of the samples was immediately compared with the standard. Two amplitude analyzers were used, one with 19, the other with 50 channels. Uranium was extracted with ethyl ether from  $HNO_3$  solutions of the ore and was electrolytically deposited. The intensity of the spectral lines of  $U_{II}$  and  $U_I$  (see Figure) was determined from the area limited by the line, thus  $2 \cdot 10^{-6}$  g uranium could be determined with 10% accuracy in 3 h. Actually the uranium content was  $n \cdot 10^{-4}$  g and the accuracy of  $U_{II}/U_I$  measurements was 1 - 3%. In some samples the relative  $U^{235}$  ( $AcU$ ) content was determined, measuring the activity of fission fragments effected by neutrons from a Po-Be source. Revising previous determinations [Ref. 1; Ref. 5: Sbornik trudov KazGu. Optika, yadernyye protsessy, 63, Alma-Ata (Collection of proceedings of the Kazakhstan State University. Optics, nuclear processes, 63, Alma-Ata)(1959)], the isotopic composition of uranium in several molybdenites (having different excessive contents of Ac) was investigated,

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## Isotopic composition of uranium in natural objects

the ratio  $U^{III}/U^{IV}$  in schroekingerite (dobeite) from the same layer and in natural water from this region was determined, and the results were tabulated. The values for the ratio of  $U^{III}/U^{IV}$  and  $AcU$  are almost normal, independently from excessive  $Ac$ . In dobeites of the same layer differences in the normal ratio of  $U^{III}/U^{IV}$  and in the increased ratio ( $U^{III}/U^{IV} = 1.06$ ) can be observed. A sharp increase to  $U^{III}/U^{IV} = 3.08$  is observed in a mineral precipitated in sediments of drilling water. The content of  $U^{III}$  changes also considerably in natural water. In 29 water samples the ratio of  $U^{III}/U^{IV}$  is varying from 0.72 to 7.8 (in 9 samples between 3.0 to 3.5), but it never approached the equilibrium value. Geochemical and physico-chemical conditions, which determine the changes in  $U^{III}/U^{IV}$  ratio will be discussed in the following papers. The present authors thank D.P. Orlov, I.V. Samoylov, V. I. Ivanov and N.T. Toktoyarov for measurements, and I.P. Koshelev for the help in the present work. There is 1 figure, 2 tables and 6 Soviet-bloc references.

SUBMITTED: May 26, 1959

Card 3/4

S/081/62/000/012/012/063  
B168/3101

AUTHORS: Cherdyntsev, V. V., Orlov, D. P., Isabayev, Ye. A., Asylbayev, U. Kh., Ivanov, V. I., Usatov, E. P., Borisenko, T. I.

TITLE: Variations in the isotopic composition of natural uranium

PERIODICAL: Referativnyy Zhurnal. Khimiya, no. 12, 1962, 115, abstract 12G16 (Tr. 9-y sessii Komis. po opredeleniyu absolyutn. vozrasta geol. formatsiy, 1960, M.-L., AN SSSR, 1961, 306 - 312)

TEXT: The  $U^{235} : U^{238}$  ratio in 14 different minerals was determined by  $\alpha$ -spectrometry and neutronometry. Some minerals show a  $U^{235}$  surplus : quartz lode  $U^{235} : U^{238} = 1.6 \pm 0.1$  ( $\alpha$ -spectrum), magnetite 1.5 ( $\alpha$ -spectrum) and 1.35 (neutronometry). In the remaining 12 minerals the observable effect of disturbance of the isotopic composition does not go beyond the limits of the experimental error. [Abstracter's note: Complete translation.]

Card 1/1

USATOV, G. A.

42354: USATOV, G. A. 4 Opyt vnedreniya avtomaticheskoy elektrosvarki v proizvodstvo lokomobiley. (Syzranskiy lo omob. zavod). V sb: Opyt novatorov mashinostroyeniya Kuybyshev, 1948, s 169-73.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.



*USATOV G.A.*  
MASHEVICH, Z.A., inzhener; MISHIN, A.N., inzhener, retsenzent [deceased];  
GINZBURG, N.Ya., inzhener, retsenzent; *USATOV G.A.*, inzhener,  
retsenzent; KCRSAKOV, V.S., dotsent, kandidat tekhnicheskikh nauk,  
redaktor; MODDEL', B.I., tekhnicheskii redaktor.

[Technology of steam engine construction] Tekhnologiya lokomobile-  
stroeniia. Moskva, Gos.nauchno-tekhnicheskoe izd-vo mashinostroit.  
i sudostroit. lit-ry, 1953. 543 p. (MIRA 8:4)  
(Steam engines--Construction)

MYAGKOV, A.T., inzh.; USATOV, G.A., inzh.

Ballasting tractor unit. Mekh.i avtom.proizv. 15 no.11:44-45  
N '61. (MIRA 14:11)

(Railroads—Ties) (Tractors)

MYAGKOV, A.T., inzh.; USATOV, G.A.

Self-propelled ballast layer. Stroil.i dor.mash. 7 no.2:19  
F '62. (MIRA 15:5)  
(Railroads--Equipment and supplies)

USATOV, Georgiy Afanas'yevich

028N/5  
767.002  
.Uo

Bor'ba za povysheniye proizvoditel'nosti truda; opyt raboty shakt tresta Nesvetayanratsit can effort to increase the productivity of labor; an experiment in the mines of the Nesvetayanratsit Combine) Moskva, Ugletekhizdat, 1957.

66 p. graphs, tables (nauchno-proizvodstvennaya Literatura po voprosam ekonomiki)

USATOV, Georgiy Afanas'evich; SMIRNOV, V.V., otvetstvennyy redaktor;  
FETTEL'MAN, N.G., redaktor izdatel'stva; DODEVA, G.V., redaktor  
izdatel'stva; ALADOVA, Ye.I., tekhnicheskii redaktor

[Struggle for increased labor productivity; practices of mines of  
the Nesvetay Anthracite Trust] Bor'ba za povyshenie proizvoditel'-  
nosti truda; opyt raboty shakht tresta Nesvetalantratsit. Moskva,  
Ugletekhizdat, 1957. 66 p. (MLRA 10:9)  
(Labor productivity) (coal mines and mining)

USATOV, G.A.

Reorganization of mines representing the capital assets of the  
"Shakhtantratsit" Trust. Ugol' 35 no.5:14-16 My '60.

(MIRA 13:7)

1. Upravlyayushchiy trestom Shakhtantratsit.  
(Donets Basin--Mine management)

MYAGKOV, A.T., inzh.; USATOV, G.A., inzh.

Cutter-loaders for the complete mechanization of loading and  
haulage operations in the construction of open pits. Shakht.  
stroil. 6 no.4:12-14 Ap '62. (MIRA 15:4)

1. Giprouglegormash.  
(Mining machinery)

*USATOV, I.*  
MORGULIS, Yu.; USATOV, I.

The bonus system in industry. Sots.trud no.9:31-38 S '57.

(MLRA 10:9)

(Bonus system)



USATOV, Ivan Andreyevich; POLYAKOV, V.V., retsenzent; BOGINSKIY, M.N., red.;  
SEMENOVA, M.M., red.izd-va; UVAROVA, A.F., tekhn.red.

[Balance sheet in factory management; using accounts of machinery manufacturing enterprises for analysis and improvement of their activities] Balans v upravlenii zavodom; izpol'zovanie otchetnosti mashinostroitel'nogo predpriiatiia dlia analiza i uluchsheniia ego deiatel'nosti. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 107 p. (MIRA 11:4)  
(Machinery industry--Accounting)

PHASE I BOOK EXPLOITATION

797

Usatov, Ivan Andreyevich

Balans v upravlenii zavodom; isspol'zovaniye otchetnosti mashinostroitel'nogo predpriyatiya dlya analiza i uluchsheniya yego deyatel'nosti (The Balance Sheet in Factory Management; Using the Accounts of Machinery-Manufacturing Establishments for Analyzing and Improving Their Operations) Moscow, Mashgiz, 1958. 108 p. 4,000 copies printed.

Reviewer: Polyakov, V.V.; Ed.: Boginskiy, M.N.; Ed. of Publishing House: Semenova, M.M.; Tech. Ed.: Uvarova, A.F.; Managing Ed. for literature on the economics and organization of production (Mashgiz): Saksaganskiy, T.D.

PURPOSE: This book is intended for managerial personnel in machinery-manufacturing plants.

COVERAGE: The author presents information on the general structure of accounting in a machinery-manufacturing plant, and on the underlying principles of a proper balance sheet. He also discusses the analysis of data included in the balance sheet and related statements. There are 10 Soviet references. No personalities are mentioned.

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The Balance Sheet in Factory (Cont.)

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The Balance Sheet in Factory (Cont.)

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Analysis of the current assets available to a plant and the allocation  
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AVAILABLE: Library of Congress (HF5686.M2U8)

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Card 3/3

USATOV, I.

Machine accounting in regional economic councils. Bukh. uch. 15  
no.2:41-43 P 158. (MIRA 11:3)

1. Starshiy nauchnyy sotrudnik Nauchno-issledovatel'skogo finan-  
sovogo instituta Ministerstva finansov SSSR (Moskva).  
(Machine accounting)

USATOV, I.

Improve the financial organization of industrial enterprises.  
Fin.SSSR 17 no.5:42-48 My '56. (MLRA 9:8)  
(Industrial management) (Finance)

NOVIKOV, R.; USATOV, I.

Price determination in the German Democratic Republic ("Calculating  
prices of industrial products of people's enterprises" [in German]  
by E. Bering, R. Bracht. Fin. SSSR 19 no.3:88-89 Mr '58.

(MIRA 11:5)

(Germany, East--Prices)

(Bering, E.)

(Bracht, R.)

USATOV, I.A., kand.ekonom.nauk, starshiy nauchnyy sotrudnik, obshchiy red.; BACHURIN, A.V., otshchiy red.; RYUMIN, S.M., obshchiy red.; ROSHCHINA, L., red.; TOLYPINA, O., red.; LEBEDEV, A., tekhn.red.

[Financial planning in industry and building] Finansovoe planirovanie v promyshlennosti i stroitel'stve. Moskva, Gosfinizdat, 1959. 181 p. (MIRA 12:9)

1. Moscow. Nauchno-issledovatel'skiy finansovyi institut.
2. Nauchno-issledovatel'skiy finansovyy institut Ministerstva finansov SSSR (for Usatov).

(Finance)



RYUMIN, S.; USATOV, I.

Analysis of the financial operation of an industrial enterprise. Fin.SSSR 20 no.2:60-68 P '59. (MIRA 12:4)  
(Russia--Industries)

USATOV, I.

Improve the establishment of norms and the organization of working capital: Important condition for the strengthening of business accounting. Fin. SSSR 21 no.2:42-51 F '60. (MIRA 13:1)  
(Finance)

USATOV, Ivan Andreyevich; RYUMIN, S., otv. red.; KONDRAT'YEVA, A., red.  
izd-va; TELEGINA, T., tekhn. red.

[Planning the turnover funds of an industrial enterprise] Planirovanie oborotnykh sredstv promyshlennogo predpriyatiya. Moskva, Gosfinizdat, 1961. 81 p. (MIRA 14:10)  
(Capital)

USATOV, I.

Utilizing working capital in socialist industry. Den. 1 kred. 19  
no.4:25-34 Ap '61. (MIRA 14:3)  
(Captial)

GUZHKOV, I.; NIKOL'SKIY, V.; USATOV, I.

Planning and using working capital in industry. Fin. SSSR. 22  
no. 2:37-50 F '61. (MIRA 14:2)

(Capital)

KOPNYAYEV, V.P., dots.; MASSARYGIN, F.S., dots.; MANZHEYEV, D.N., dots.; KOPNYAYEV, V.P., dots.; USATOV, I.A., kand. ekonom. nauk; IL'IN, V.M., dots.; KOLYAKOV, D.S.; MOTOV, S.I., dots.; KOROTKOVA, L., red.; MEDVEDEVA, R., red.; TELEGINA, T., tekhn. red.

[Analysis of the financial and economic operations of enterprises] Analiz finansovo-khoziaistvennoi deiatel'nosti predpriatii. Pod obshchei red. Kopnyayeva. Moskva, Gosfirizdat, 1962. 357 p. (MIRA 15:12)

(Finance) (Industrial management)

USATOV, I.A., kand. ekon. nauk; GUBIN, B.V., kand. ekon. nauk; SMIRNOV, A.D., dots.; LAPTEV, Ye.N.; MOZHIN, V.P., kand.ekon.nauk; GUMEROV, R.M.; KORYUNOV, S.N.; PSHECHICHYY, P.P.; MIKOV, N.M.; FILATOV, N.L.; FILIPPOVA, E., red. izd-va; LEBEDEV, A., tekhn. red.

[Economics and finance of socialist enterprises]Ekonomika i finansy sotsialisticheskikh predpriyatii. Moskva, Gosfinizdat, 1962. 404 p. (MIRA 15:9)  
(Industrial management) (Finance)

GUBIN, Boris Vasil'yevich; SMIRNOV, Aleksandr Dmitriyevich; USATOV,  
Ivan Andreyevich; GOLUBENICHY I., red.; VORONINA, R.,  
tekhn. red.

[Principles of socialist management in industry] Osnovy  
sotsialisticheskogo khoziaistvovaniia v promyshlennosti.  
Moskva, Vysshiaia shkola, 1963. 226 p. (MIRA 17:3)



BARANOV, P.; USATOV, M.

Checking lighting arresters installed on farm buildings.  
S11'.bud. 7 no.6:13-14 Je '57. (MIRA 13:3)  
(Lighting protection)

USATOVA, M.F.

Medical care for factory workers. Sov.zdrav. 15 no.5 supplement:  
9-10 0 '56. (MLRA 10:1)

1. Starshiy inspektor Ministerstva zdravookhraneniya SSSR.  
(INDUSTRIAL HYGIENE  
med. care of factory workers in Russia)

USATOV, II.

Automatic vending machines. Pozh.delo 7 no.8:30 Ag '61.

(MIFA 14:8)

(Vending machines)

USATOV, N.

Automatic regulator. Pozh,delo 8 no.7:23-29 J1 '62.

(Thermostat) (Wood--Drying)

(MIRA 15:8)

USATOV, N. V.

N/5-  
748.1  
.A31

Protivopozharnyye meropriyatiya pri proyektirovanii i proizvodstve  
stroitel'nykh rabot v sel'skoy mestnosti (Fire-fighting measures during  
the planning and execution of construction work in rural locations, by  
Aleksandrov I N. V. Ustov. Moskva, Izd-vo MKKH, 1957.

158 p. illus., diagrs., Tables.

"Literatura": p. 156-157.

~~ALEKSANDROV~~, Valentin Filippovich; ~~USATOV~~, Nikolay Vasil'eyvich; ~~ROSSADKIN~~,  
I.D., redaktor; ~~VINOKUROVA~~, Ye.B., redaktor i sdatel'stva; ~~KONYASHINA~~,  
A.D., tekhnicheskiiy redaktor

[Fire prevention in planning and conducting construction operations in rural localities] Protivopozharnye meropriiatiia pri proektirovani i proizvodstve stroitel'nykh rabot v sel'skoi mestnosti. Moskva. Izd-vo M-va kommun.khoz. RSFSR, 1957. 158 p. (MLRA 10:8)  
(Fire prevention)

USATOV, N.

Keep the lightning protection equipment in good order. Pozh.delo  
3 no.8:10 Ag '57. (MIRA 10:8)  
(lightning protection)

USATOV, N.

BARANOV, A. (Kiyev); USATOV, N. (Kiyev)

Characteristics of PPV wires. Pozh.delo 3 no.10:32 0 '57.

(MIRA 10:11)

(Electric wire, Insulated)



BARANDV, V.; USATOV, M. (Kiyev)

Antenna break caused a fire. Posh.delo 4 no.11:15 H '58.  
(Radio--Antennas) (MIRA 11:12)

L 33477-66 EWT(d)/EWT(1)/EWP(v)/EWP(k)/EWP(h)/EWP(1) GD/BC

ACC NR: AT6011938

SOURCE CODE: UR/0000/66/000/000/0186/0190

AUTHOR: Kuznetsov, V. Ye. (Krasnoyarsk); Usatov, V. U. (Krasnoyarsk)

ORG: none

TITLE Dynamic magnetostriction measurements

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy, 5th. Avtomaticheskii kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Izmeritel'nyye informatsionnyye sistemy. Ustroystva avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Information measurement systems. Automatic control devices. (Electrical measurements of non-electrical quantities). Novosibirsk, Izd-vo Nauka, 1966, 186-190

TOPIC TAGS: magnetostriction, interferometer, ~~measuring instrument~~ *ferromagnetic material, constant magnetic field, laboratory instrument*

ABSTRACT: Whereas magnetostriction of ferromagnetics in static fields has been thoroughly studied in the past, the same effect in dynamic fields is still a poorly understood subject. The present article describes a new method and presents initial results of dynamic magnetostriction  $\lambda$  and magnetic susceptibility  $\chi/H$  measurements in iron over a wide range of constant magnetic fields and different amplitudes of the modulating field. The method is based on the modulation interferometry principle developed in radio physics and optics and used for the measurements of the amplitudes of oscillating crystals of dielectrics

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L 33477-66

ACC NR: AT6011938

(see, e.g., I. S. Zheludev, A. A. Fotchenkov, Kristallografiya, 3, 3, 1958). The instrument described by the authors can register  $\lambda$  of the order of  $10^{-6}$ - $10^{10}$  in constant (polarizing) magnetic fields up to 159,155 a/m and variable (modulating) fields up to 3,580.99 a/m. The tested frequencies were in the audio and ultrasonic regions. The sensitivity is 0.5 - 1 a/m, and the error 5 - 10%. Orig. art. has: 4 formulas and 4 figures.

SUB CODE: 20 / SUBM DATE: 29Nov65/ ORIG REF: 000 / OTH REF: 002

Card

2/2 1145

KIRENSKIY, L.V.; KUZNETSOV, V.Ye.; USATOV, V.U.

Magnetostriction of iron in field variables. Fiz. met. i metalloved.  
20 no.2:221-225 Ag '65. (MIRA 18:9)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.

242200

39167  
S/120/62/000/003/037/048  
E032/E114

AUTHORS: Kuznetsov, V.Ye., and Usatov, V.U.  
TITLE: Measurement of periodic magnetostrictional strains  
PERIODICAL: Priory i tekhnika eksperimenta, no.3, 1962, 157-160  
TEXT: The authors describe an apparatus which can be used to measure small (down to 0.3 Å) changes in linear magnetostriction. The modulation-interferometric method is employed, in which the interference pattern is modulated at a fixed frequency so that the periodic shift of the interference bands produces an alternating component in the current of a photomultiplier which is used as the detector. A block diagram is shown in Fig.1. The light beam produced by a motion picture projector 1 passes through the lens 2 and the light filter 3, and enters the Michelson interferometer 4. The latter consists of glass plates 6 and 7 and reflecting mirrors 5 and 8. Mirror 8 is attached to the specimen 9. The latter is placed inside coils 11 and 10 (large and small respectively). The large coil produces up to 5 kOe and the small coil up to 60 Oe. Currents through the two coils are measured by the ammeters 12 and 14. The large coil is  
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Measurement of periodic ....

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E032/E114

supplied by an oil-cooled transformer, and the small coil by an audiofrequency oscillator 16 through an amplifier 15. The small coil is used to modulate the magnetic field. The modulated interference pattern is magnified by the lens 17 by a factor of 4 and can either be viewed on the screen 20 or focused by the lens 21 on the photomultiplier cathode. The pattern is thrown onto the screen by the mirror 19. The photomultiplier is supplied by the stabilized EHT source 23 and the d.c. component of the photocurrent is measured by the microammeter 24. The alternating component is fed into the filter-amplifier 27 and the rectified output is measured by the output meter 28. The filter-amplifier is tuned to the modulation frequency and has a bandwidth of 5 - 7 c.p.s. It has five amplification stages and an overall amplification coefficient of  $2 \times 10^5$ . The modulated signal may be fed directly into the filter-amplifier for calibration purposes by means of the switch 26. The calibration voltage is measured by the vacuum tube voltmeter 25. The output can also be monitored by the CRO 29. In practice a dark band of maximum contrast is selected by the slit 18. The performance of

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Measurement of periodic ...

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E032/E114

the apparatus was checked by measuring the amplitude of magnetostrictional oscillations of silicon iron (0.92% Si). Fig.2 shows the dependence of the amplitude of vibrations on the constant magnetic field for three values of the modulating field at 20 °C. The sensitivity of the device (0.3 Å) is said to be higher by three orders of magnitude as compared with static measurements. The experimental error is of the order of 5 - 10%.

ASSOCIATION: Institut fiziki SO AN SSSR  
(Physics Institute SD AS USSR)

SUBMITTED: September 18, 1961

Card 3/4 3

KIRENSKIY, L.V.; KUZNETSOV, V.Ye.; USATOV, V.U.

[Dynamic magnetostriction of iron] Dinamicheskaya magnitostriksiya zheleza. [n.p.]. AN SSSR, Sibirskoe otdelnie. In-t fiziki, 1964. 29 p. (MIRA 17:7)



USATOVA, A.I.

Destruction of used emulsion. Mashinostroitel' no. 1:27  
Ja '66 (MIRA 19:1)

Purification of ~~soluble isocyanates~~ and calcium chloride  
for the preparation of urethanes. M. S. Pabirzich,  
V. Strukov, and L. A. Hestova. U.S.S.R. 104,440, Dec.  
25, 1955. Sol. W. and  $\text{CaCl}_2$  solns. are highly purified  
by passing the former through a column contg.  $\text{Al}_2\text{O}_3$  and  
 $\text{ZnS}$  in a wt. ratio of 20:1 and the  $\text{CaCl}_2$  soln. through a  
chromatographic column charged with  $\text{Al}_2\text{O}_3$ . M. Hesch

PM MT

PLOTNIKOV, V.I.; USATOVA, L.P.

Coprecipitation of small amounts of arsenic with metal hydroxides.  
Zhur.anal.khim. 19 no.10:1183-1187 '64. (MIRA 17:12)

1. All-Union Scientific Research Mining-Metallurgical Institute of  
Non-Ferrous Metals, Ist-Kamenogorsk.

PLCTNIKOV, V.I.; ZELENSEKAYA, I.I.; USATOVA, I.P.

Rhenium extraction from sulfuric acid solutions by tributyl  
phosphate. Sbor.trud. VNIITSVETMET no.9:112-114 '65.  
(MIRA 18:11)

[illegible]

*B*

WORKING SAIGVA SKINS. A. Obshirin and N.  
Usatshev (Kosh.-Duvn. Prom., 1935, 14, 69).--  
Technical details of a chrome-tanning process are given.  
Ch. Abs. (p)

*B-2-10*

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBLIVE  
SYMBOLS AND  
RELATIONS  
AND LITERATURE

USATSCIA, H.

A. USATSCHE V, Fosh Chuvn From, 1934, 14, 507-508

| 1ST AND 2ND GROUPS  |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  | 3RD AND 4TH GROUPS       |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|----------|--|--|--|--|--|--|--|--|--|--|--|--|--------------------------|--|--|--|--|--|--|--|--|--|--|--|--|----------|--|--|--|--|--|--|--|--|--|--|--|--|
| COMMON ELEMENTS   |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  | COMMON TRANSITION METALS |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  |
| <p>BC</p> <p style="text-align: right;">B-I-2</p> <p style="text-align: center;">PROCESSES AND PROPERTIES INDEX</p> <p><b>Mechanism of the catalytic synthesis of ammonia.</b> P. V. Usovichov<br/> <i>(J. Phys. Chem. Russ., 1940, 14, 1244-1249).</i>—If a <math>N_2-H_2</math> mixture is supplied to an industrial catalyst saturated with <math>N_2</math>, no <math>NH_3</math> is produced; if the catalyst has been previously saturated with <math>H_2</math>, <math>NH_3</math> synthesis begins immediately. Hence adsorption of <math>H_2</math> is the first step of the synthesis. <math>N_2O</math> displaces from the surface of 1 c.c. of an industrial catalyst (Fe + 1.4% of <math>Al_2O_3</math> + 0.4% of <math>K_2O</math>, or Fe + 7% of <math>Al_2O_3</math>) 1-1.7 c.c. of <math>NH_3</math>, indicating that the surface is almost saturated with <math>NH_3</math>, and only its least active spots can accelerate the synthesis.<br/> J. J. B.</p> <p>ASB-35A METALLURGICAL LITERATURE CLASSIFICATION</p> |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  |                          |  |  |  |  |  |  |  |  |  |  |  |  |          |  |  |  |  |  |  |  |  |  |  |  |  |
| SANDS 2A  |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2B |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2C                 |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2D |  |  |  |  |  |  |  |  |  |  |  |  |
| SANDS 2E  |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2F |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2G                 |  |  |  |  |  |  |  |  |  |  |  |  | SANDS 2H |  |  |  |  |  |  |  |  |  |  |  |  |



Catalytic hydrogenation of amines. V. Hydrogenation of ketazines. The relative affinities of the methyl and ethyl groups. K. A. TAIFALIS and E. W. O'NEILL (J. Res. Phys. Chem. Soc., 1930, 62, 1241—1256; *ibid.*, 1932, 157; 1927, 360)—Bisdimethyl ketazine, bisdimethyl ethyl ketazine, and bisdimethyl ketazine were investigated in the same way as the alkanes (*loc. cit.*); the rate of hydrogenation of the dimethyl was greater than for the methyl ethyl, and the rate of the latter greater than for the diethyl compound, the quantitative results of the former investigation being confirmed.

Bisdimethyl ethyl ketazine, b. p. 171—172°, *d*<sub>4</sub><sup>20</sup> 0.8404, *n*<sub>D</sub><sup>20</sup> 1.4281, on hydrogenation gave NN-di-*tert*-butylhydrazine, b. p. 160—161°/760 mm., *d*<sub>4</sub><sup>20</sup> 0.8216, *n*<sub>D</sub><sup>20</sup> 1.4283; this formed a dihydrochloride readily decomposing into the monochloride, m. p. 147°, which yielded a cyanate, m. p. 48—49°, with potassium cyanate, and the phenylthiocarbamate, m. p. 78—79°, with phenylthiocarbamide. The hydrazine can be converted into the corresponding *tert*-compound, *tert*-*tert*-butylhydrazine, b. p. 140—141°/760 mm., *d*<sub>4</sub><sup>20</sup> 0.7894, *n*<sub>D</sub><sup>20</sup> 1.4127, either by cautious oxidation with mercuric oxide or with nitrous acid by way of the nitrous compound. If the alcoholic solution of the *tert*-compound is saturated with hydrogen chloride, *tert*-*tert*-butylhydrazine hydrochloride is obtained, which heating with benzoyl chloride yields dibenzoyl-*tert*-butylhydrazine, m. p. 160—170°. The hydrochloride

of the primary hydrazine and potassium thiocyanate on heating give the *iso*-isopropylthiocarbamate, m. p. 57.5–58°. Diisopropyl ketone, b. p. 100–107°/760 mm., d. 0.8411, n<sub>D</sub><sup>20</sup> 1.4374, on hydrogenation yields *HN*-di-*tert*-isopropylamine, b. p. 100–100.5°/760 mm., which is very similar to the lower homologues, readily giving the *thio*-derivative, b. p. 100–100°/15 mm., m. p. 57–57.5°. *iso*-Compound, b. p. 101–102°/760 mm., primary hydrazine and its diisopropyl derivative, m. p. 100–100°, and *tert*-butylamine, m. p. 107–108°, with the corresponding reagents.

M. ZVIMINTSOV.

USATYUK, F., traktorist (Selo Kamennoye, Savranskiy rayon, Odeskaya oblast')

My suggestion. Sel'mekh. no.3:31 '62.  
(Tractors--Transmission devices)

(MIRA 15:3)

USATYUK, M.K.

Usatyuk, M.K. and Shustrov, V.V. "The chemical cleaning of potatoes and root vegetables," Sbornik nauch. rabot (Nauch. -issled. in-t togoevli i obshchestv. pitaniya,) i sc 2, 1949, p. 45-47

SO: U-5141, 17 December 1953, (Istoria zhurnal 'nykh Statey No. 26, 1949).

USATYUK, M.K.

Usatyuk, M.K. and Shustrov, V.V. "Methods of potato blanching for drying," Sbornik nauch. rabot (Nauch.-issled. in-t torgovli i obshchestv. pitaniya), Moscow, 1949, p. 40-62

SC: U-5241, 17 December 1953, (Letovis 'zhurnal 'nykh Statey, No. 16, 1949).

USATYUK, M.K.

Usatyuk, M.K. "The drying of watermelons and pumpkins,"  
Sbornik nauch. rabot (Nauch.-issled. in-t trgovli i obsh-  
chestv. pitaniya), Moscow, 1949, p. 71-73

SC: U-5241, 17 December 1953, (Letopis 'zhurnal 'nykh Statey No. 26, 1949).

USATYUK, M.K.; BARANOV, I.P.

[Pickling fruits and vegetables] Marinovanie plodov i ovoshchei.  
Moskva, Gos.torgovoe izd-vo, 1953. 32 p. (MIRA 8:3)  
(Canning and preserving)

USATYUK, M.K.

Torgovlia bakaleinymi tovarami (Grocery trade). Moskva, Gostorgizdat, 1953. 92 p.

SO: Monthly List of Russian Accessions, Vol. 7 No. 2 May 1954



USATYUK, Maksim Klement'yevich; BARANOV, Ivan Pavlovich; VASIL'YEV, A.I.,  
red.; MAKSIMOVICH, A.G., red.; ROSLOV, G.I., tekhn. red.

[Pickling fruits and vegetables] Marinovanie plodov i ovoshchei.  
Pod red. A.I. Vasil'eva. Izd. 3., dop. i perer. Moskva, Gos.  
izd-vo torg. lit-ry, 1956. 38 p. (MIRA 11:8)  
(Canning and preserving)

USATYUK, Maksim Kliment'yevich; SHUSTROV, Vasilii Viktorovich; SIMEL'NIKOVA, TS.B., redaktor; MEDRISH, D.M., tekhnicheskiy redaktor

[Storage and processing watermelons, melons, and pumpkins] Khranenie i pererabotka arbuzov, dyn' i tykvy. Moskva, Gos. izd-vo torg. lit-ry, 1956. 121 p. (MIRA 10:4)  
(Vine crops) (Canning and preserving)

USATYUK, M.K., kand.tekhn.nauk; SPERANSKIY, V.G., prof., doktor tekhn.  
nauk, red.; PETROVA, R.G., tekhn.red.

[Potatoes and vegetables, their handling, and principles of their processing] Tovarovedenie kartofelia i ovoshchai s osnovami ikh pererabotki. Pod red. V.G.Speranskogo. Moskva, Vses.zaochnyi koop.tekhnikum TSentrosoiuza, 1956. 221 p.

(MIRA 13:12)

(Potatoes)

(Vegetables)

USATYUK, H., kand. tekhn. nauk.

Making jam. Obshchestv. pit. no.3:51 '57.  
(Jam)

(MIRA 11:3)

USATYUK, M., starshiy nauchnyy sotrudnik

Natural loss of fresh early vegetables, fruit and berries during  
air transportation. Sov. targ. no.8:42-43 Ag '58. (MIRA 11:9)

1. Nauchno-issledovatel'skiy institut trgovli i obshchestvennogo  
pitaniya.

(Farm produce--Transportation)

ANTONOV, M.; USATYUK, M.; OSENOVA, Ye.

Transportation and storage of potatoes in containers. Sov. torg.  
no.10:30-35 0 '58. (MIRA 11:10)

(Potatoes)

ANTONOV, M.V., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; USATYUK, M.K., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; SHUSTROV, V.V., kand.tekhn.nauk, starshiy nauchnyy sotrudnik [deceased]; TSIPHERSON, A.L., red.; SUDAK, D.M., tekhn.red.

[Collection of recipes and technical instructions for the processing of fruits and vegetables] Sbornik retseptur i tekhnologicheskikh ukazaniy po pererabotke plodov i ovoshchei. Izd.4, dop. i perer. Moskva, Gos.isd-vo torg.lit-ry, 1959. 207 p. (MIRA 13:5)

1. Moscow. Nauchno-issledovatel'skiy institut torgovli i obshchestvennogo pitaniya. 2. Nauchno-issledovatel'skiy institut torgovli i obshchestvennogo pitaniya Ministerstva torgovli SSSR (for Antonov, Usatyuk, Shustrov).  
(Fruit) (Vegetables)

USATYUK, M., kand.tekhn.nauk

Sauerkraut. Otschestv.pit. no.8:23 Ag '59.  
(Sauerkraut) (MIRA 12:12)



USATYUK, M., starshiy nauchnyy sotrudnik

Answers to the readers. Obshchestv.pit. no.9:25-26 S '59.  
(MIRA 12:12)

1. Nauchno-issledovatel'skiy institut torgovli i obshchestvennogo  
pitaniya.

(Cookery)

USATYUK, M, kand.tekhn.nauk

How to pack sauerkraut into glass containers. Sov.torg. 33  
no.9:55-56 S '59. (MIRA 12:12)  
(Sauerkraut)

USATYUK, M.; kand. tekhn. nauk

Horseradish. Obshchestv. pit. no. 10:23-25 '59. (MIRA 13:4)  
(Horseradish)

USATYUK, M., kand.tekhn.nauk

Potato storage methods. Obshchestv.pit. no.11:24-25  
H '59.

(MIRA 1313)

(Potatoes--Storage)

USATYUK, M., starshiy nauchnyy sotrudnik

Vegetable storage. Obshchestv.pit. no.12:22-24 D "59.  
(MIRA 13:4)

1. Nauchno-issledovatel'skiy institut trgovli i obshchestvennogo  
pitaniya.

(Vegetables--Storage)

ANTONOV, M.V., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; USATYUK,  
M.K., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; SINEL'NIKOVA, TS.,  
red.; KUZ'MIN, N., tekhn.red.

[Collected recipes and technological specifications for processing  
fruits and vegetables] Sbornik retseptur i tekhnologicheskikh  
ukazanii po pererabotke plodov i ovoshchei. Izd.5., ispr. i dop.  
Moskva, Gos.izd-vo torg.lit-ry, 1960. 317 p.

(MIRA 13:12)

1. Moscow. Nauchno-issledovatel'skiy institut torgovli i obshchest-  
vennogo pitaniya. 2. Nauchno-issledovatel'skiy institut torgovli  
i obshchestvennogo pitaniya (for Antonov, Usatyuk).
- (Fruit--Preservation) (Vegetables--Preservation)

USATYUK, M.K.

Discontinue the design and construction of sour cabbage shops  
with cemented bins. Kons.i ov.prom. 15 no.9:15-18 8 '60.  
(MIRA 13:9)

1. Nauchno-issledovatel'skiy institut trgovli i obshchestvennogo  
pitaniya Ministerstva trgovli RSFSR.  
(Canning and preserving) (Cabbage)

USATYUK, Maksim Klement'yevich; GRANOVSKAYA, I.E., red.; VASILEVSKAYA,  
~~I.V., tekhn.red.~~

[Storing vegetables] Opyt khraneniia ovoshchei. Moskva, Gos.  
izd-vo torg.lit-ry, 1961. 85 p. (MIRA 14:6)  
(Vegetables—Storage)



USATYUK, Maksim Klimont'yevich; GRANOVSKAYA, I.E., red.; EL'FINA, E.M.,  
tekhn. red.

[Manual for fruit and vegetable growers; salting, fermenting,  
pickling and other methods of processing vegetables, fruits,  
and mushrooms] Spravochnik plodoovoshchnika; po voprosam soleniia,  
kvasheniia, marinovaniia i drugikh vidov pererabotki oboshchei,  
plodov i gribov. Moskva, Gos. izd-vo torg. lit-ry, 1961. 214 p.  
(MIRA 14:7)

(Fruit--Preservation) (Vegetables--Preservation) (Mushrooms--  
Preservation)

BOGOYAVLENSKAYA, Zoya Vasil'yevna; USATYUK, M.K., red.; SHVETSOV,  
V.G., red.ind-va; SOTNIKOVA, N.F., takhn. red.

[Purchase and processing of wild fruit and berries] Zakupka i  
pererabotka dikorastushchikh plodov i iagod. Moskva, Izd-vo  
TSentrosoiuza, 1962. 82 p. (MIRA 16:3)  
(Canning and preserving)

VASIL'YEV, Aleksey Ivanovich; ANTONOV, Mikhail Vasil'yevich;  
MALOZEMOV, Viktor Mikhaylovich; USATYUK Maksim  
Klement'yevich, kand. tekhn. nauk; REVIS, Lidiya  
Iosifovna; AYRIYEVA, N.S., red.

[Manual for the horticulturist] Spravochnik plodoovoshch-  
nik... Moskva, Ekonomika, 1964. 358 p. (MIRA 17:11)

MASIN, V.V.; USATERN, T.I.

Paleontological finds made by the school children of Y. Masin.  
Sbor. stud. nauch. rad. Nauch. stud. ob-va IAn. gos. ped. inst.  
no.3:141-158 '56. (MIRA 14,156)  
(Yaroslavl Province - Paleontology)

USATYY, B.Ya.

Developing and establishing crop rotation systems. Zemledelie?  
no.1:60-61 Ja '59. (MIRA 12:1)

1. Glavnyy agronom Olykskogo konzavoda.  
(Rotation of crops)

USCHERSOHN, H., conf. univ. (Bucuresti)

Boundaries of empiricism in scientific research. Natura Biologie  
14 no. 1:3-10. Ja-F '62.

USCHERSOHN, H., conf. univ.

Some philosophical problems of biology. St. st. Ten Duc 14 no.3:  
36-37 Mr '62

USCHERSOHN, H.; STRUNGAMU, Gr.; BOLDOR, O.; DRAGHICI, I.

Specificity of the biological form of matter motion and its connections with the physicochemical processes of the living organism. Trav Muz Mat 4:9-46 '63.



USCHERSOHN, H.

The relation of social psychology to social conscience.  
Rev psihologie 9 no. 4: 557-573 '63.

USCHERSOHN, H., conf. univ. (Bucuresti)

Some aspects of the vitalism and mechanism in contemporary biology.  
Natura Biologie 15 no.6:3-11 N-D '63.

USCHERSOHN, H., conf. univ.

Contemporary genetics and its philosophical implications.  
St si Teh Buc 15 no.6:30-31, 34 Je '63.

USCHERSOHN, H. (Bucuresti)

Mechanism in biology. Natura Biologie 17 no.1:3-14 Ja-P '65.

RUMANIA

USCHERSOHN, H., University lecturer, Bucharest

"Biology and the Contemporary Fideism"

Bucharest, Natura, Seria Biologie, Vol. 18, No. 3, May-June 66, pp. 33-40

The achievements of contemporary science, force religion to revise its tactics, to modernize its ideological arsenal. The majority of modern theologians try to prove that science and religion may coexist. Contemporary fideism follows two main paths: modernization of the religious dogmas and recognition of scientific data. Contemporary fideism turns special attention toward biology taking advantage of "scientific investigations" to prove the existence of God, to defend the doctrine of the various stages of existence, and to indicate the special position of man in the world. The fight against residual religious beliefs is carried on in this country, especially through education.

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- END -

CSO: 2000-N

27 4/24/51  
 Refractometric determination of derivatives of salicylic acid in binary systems. H. Kohnenwald, I. Waidelich and E. Waidelich (J. Pharm. Pharm., 1950, 13, 205-211). The variation of  $n_D$  with concn. for each component of the mixture is determined in a suitable solvent. The  $n_D$  of the mixture determined at a suitable concn. (up to 20%) will then give the amount of each component in the mixture. Synthetic mixtures of Na salicylate, acetylsalicylic acid, caffeine, sodium salicylate, hexamethylenetetramine, antipyrine, pyrazinone and salicylans were examined using an Abbe refractometer of accuracy  $1 \times 10^{-4}$ . With this instrument an accuracy of approximately 5% is claimed. Of the mixtures examined only hexamethylenetetramine could not be determined owing to the insufficient difference in  $n_D$ . (14 references.)  
 B. LARK

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USCINOWICZ, EDWARD

Refractometric determination of derivatives of salicylic acid in a mixture of binary systems. Kazimierz Kalinowski, Irenei Wardecka, and Edward USCINOWICZ (Zakl. Chem. Farm., Lodz). *Acta Polon. Pharm.* 13, 205-11 (1956) (English summary).—Quant. analysis of mixts. of binary systems by a refractometric method was investigated. Varying concns. of the substances were used as supplementary agent; and distd. water as a solvent for Na salicylate + hexamethylenetetramine, Na salicylate + antipyrine, Na salicylate + caffeine salicylate, and caffeine salicylate + antipyrine. Fifty % EtOH was employed as a solvent for Na salicylate + aminopyrine, and caffeine salicylate + aminopyrine; 85% alc. was the solvent for acetylsalicylic acid + salipyrine. Among these mixts. only the identification of Na salicylate + aminopyrine was not possible, primarily because of the too small difference in the  $n$  of these compds. The refractometric method is adequate for detg. mixts. of therapeutic compds.  
Richard Ehrlich

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COMMON ELEMENTS

OPEN

MATERIALS INDEX

1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH GROUPS

5TH AND 6TH GROUPS

7TH AND 8TH GROUPS

9TH AND 10TH GROUPS

11TH AND 12TH GROUPS

13TH AND 14TH GROUPS

15TH AND 16TH GROUPS

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